



The FSA Solution Life Cycle

It's like building your dream house...



Plan It!

Vision



Design It!

Definition



Build It!

Construction



Move In!

Deployment



Maintain It!

Support & Retirement



Learning Objectives

- ◆ Understand the SLC's Purpose
- ◆ Understand the Roles identified in the SLC
- ◆ Identify and Define the SLC's Five Phases
- ◆ Identify the Workproducts Recommended by the SLC

What is a Solution Life Cycle?

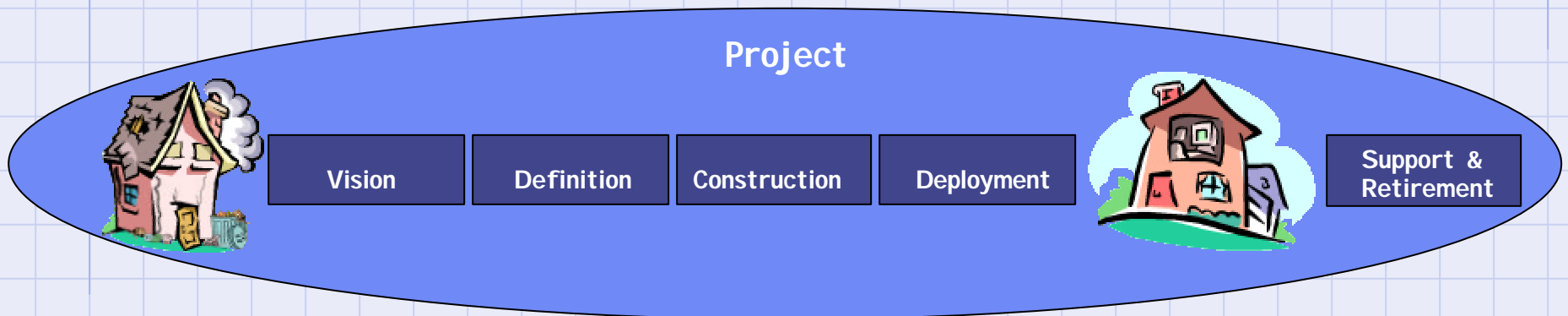


- ◆ A solution is an answer to a business need.
- ◆ A life cycle guides a solution from beginning to end.
- ◆ FSA's Solution Life Cycle (SLC) is a framework containing a set of defined, documented and practiced processes that guide a solution from beginning to end.

What is the FSA SLC?



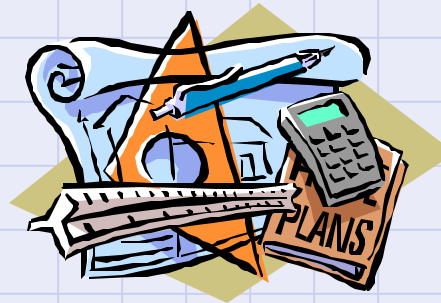
The SLC is a framework for completing a solution.



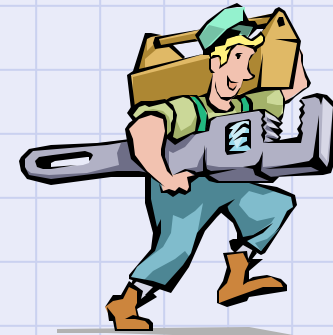
This framework is supported by additional information.



Process Guides



Job Aids/Samples



Roles



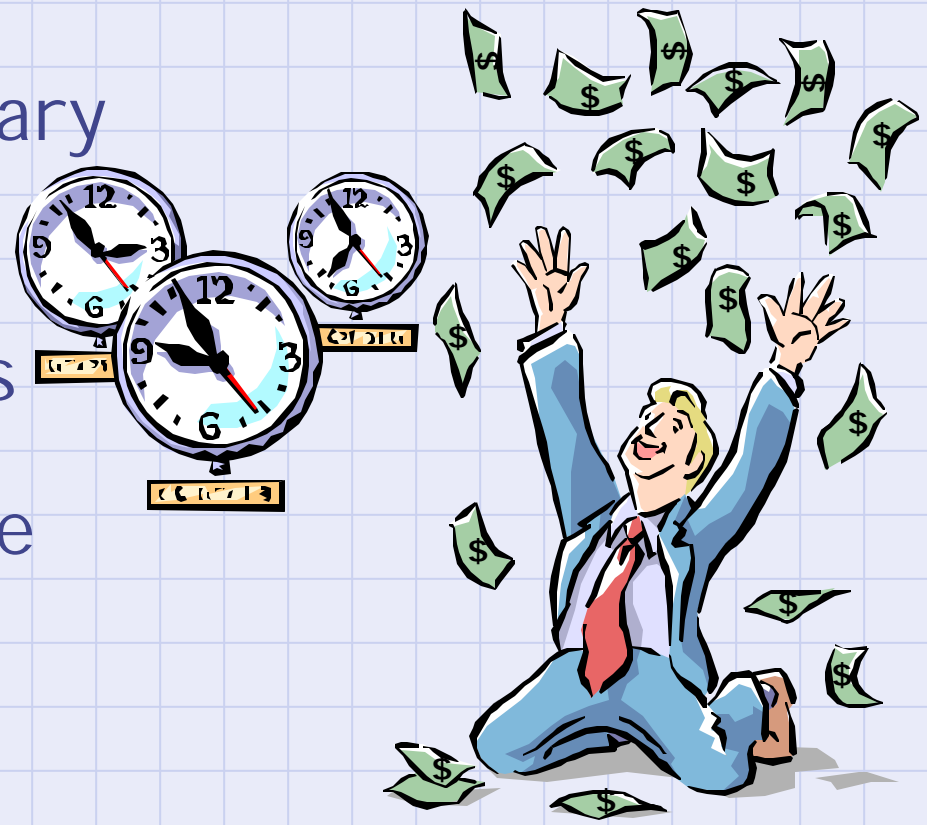
Who needs the SLC?

- ◆ Anyone who participates in or manages the acquisition of a solution for FSA
 - These Roles include:
 - ◆ FSA Project Managers
 - ◆ Subject Matter Experts (SMEs)
 - ◆ Members of an Integrated Product Team (IPT)
 - ◆ CIO Participants
 - ◆ Operating Partners
 - ◆ Executive Sponsor



How do you benefit?

- ◆ Reduces Time and Effort
- ◆ Eliminates Unnecessary Rework
- ◆ Enables Cost Savings
- ◆ Gets Everyone on the Same Page



How does the SLC work?

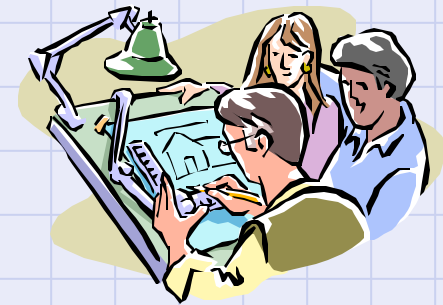


Phase 1: Vision



Plan I t!

Phase 2: Definition



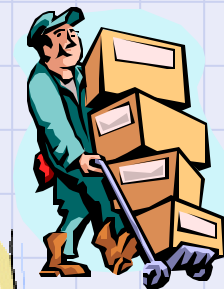
Design I t!

Phase 3: Construction



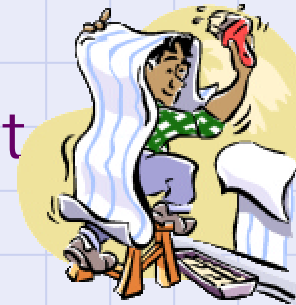
Build I t!

Phase 4: Deployment



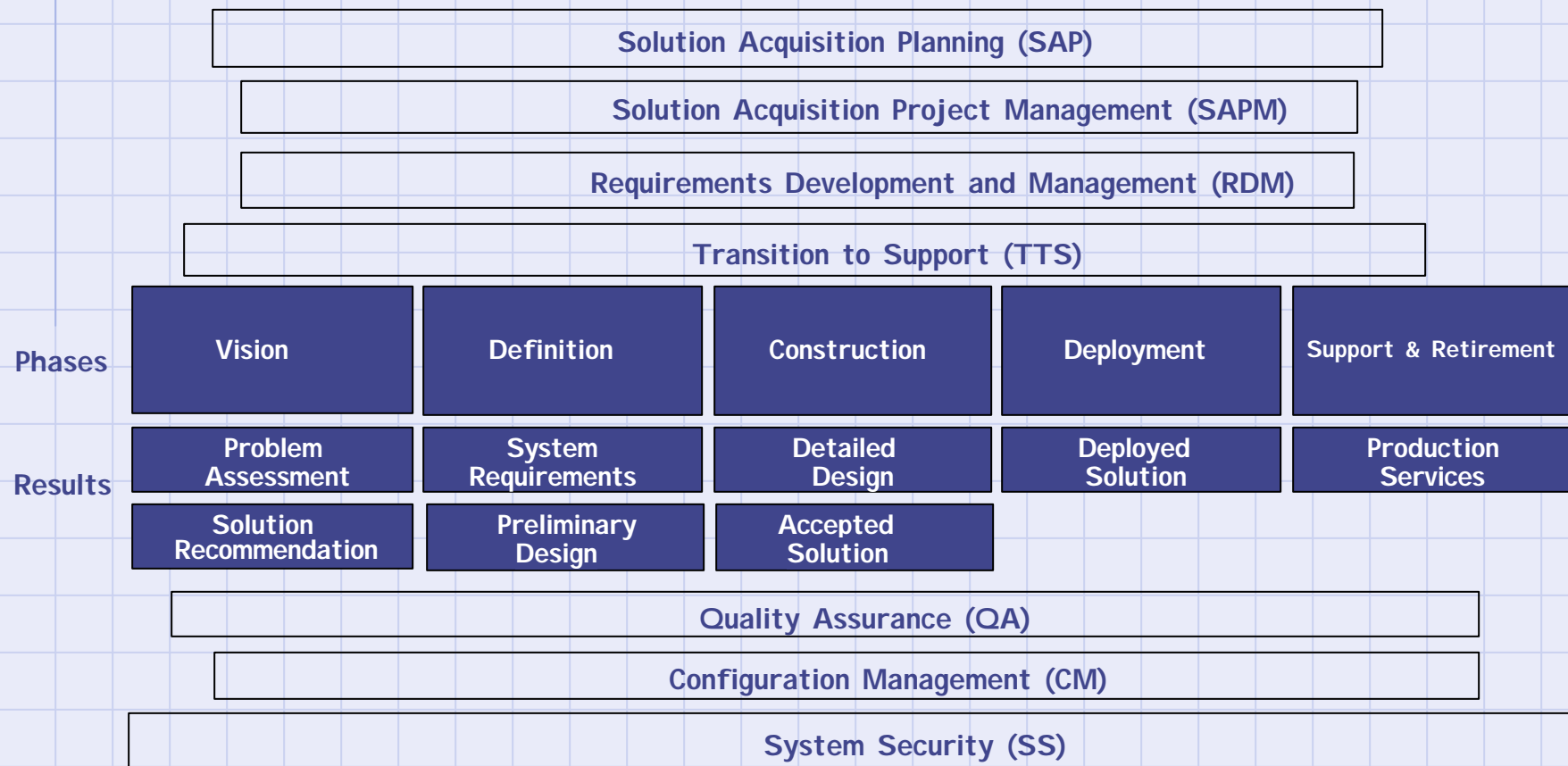
Move I n!

Phase 5: Support & Retirement



Maintain I t!

The Solution Life Cycle



The SLC is ...



- ◆ FSA's guide to acquiring a solution
- ◆ A framework that provides
 - A Repeatable Process
 - A Common Language
 - An Efficient Solution

The Vision Phase



Plan It!

Plan It!



Phase 1: Vision

- ◆ The Purpose of the Vision Phase is to:
 - Conduct an assessment of the business problem
 - Provide a Solution Recommendation



Plan It!



Phase 1: Vision

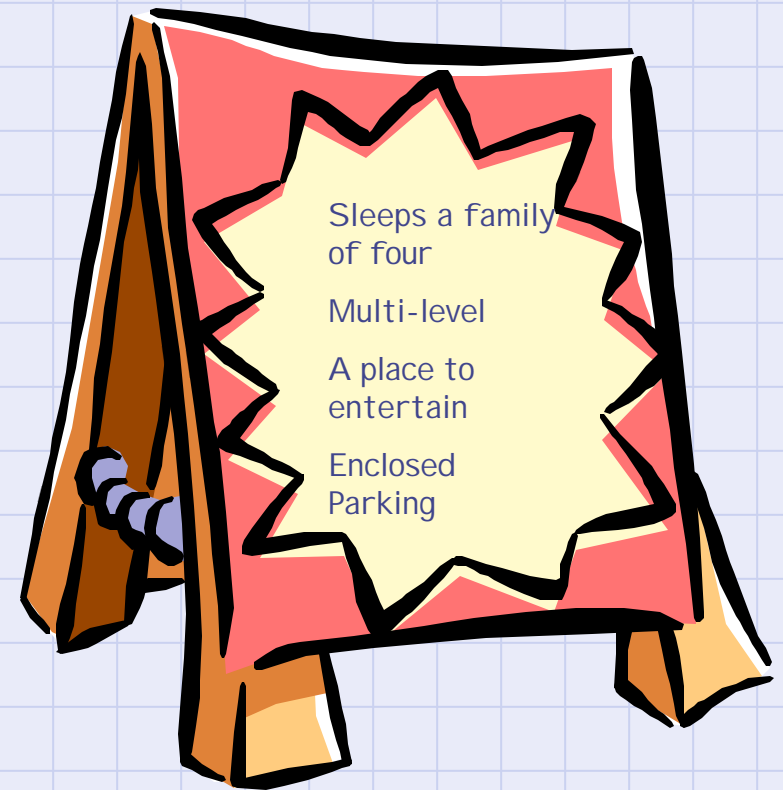
◆ Define High Level Requirements

◆ What are High Level Requirements?

- The basic “facts” our business case needs to address
- These requirements will be translated into “testable” low level requirements during the Definition phase

◆ What’s available to help me?

- The Requirements Development and Management Process Guide





Phase 1: Vision

◆ Build a Business Case

◆ What should a Business Case contain?

- The business need
- The projected costs and value
- Clearly identified scope
- Benefits and Risks
- Technologies Used
- DSG Review and IRB Approval

◆ What's available to help me?

- A Business Case Template
- Business Case Estimating Tool
- Solution Acquisition Planning Process Guide

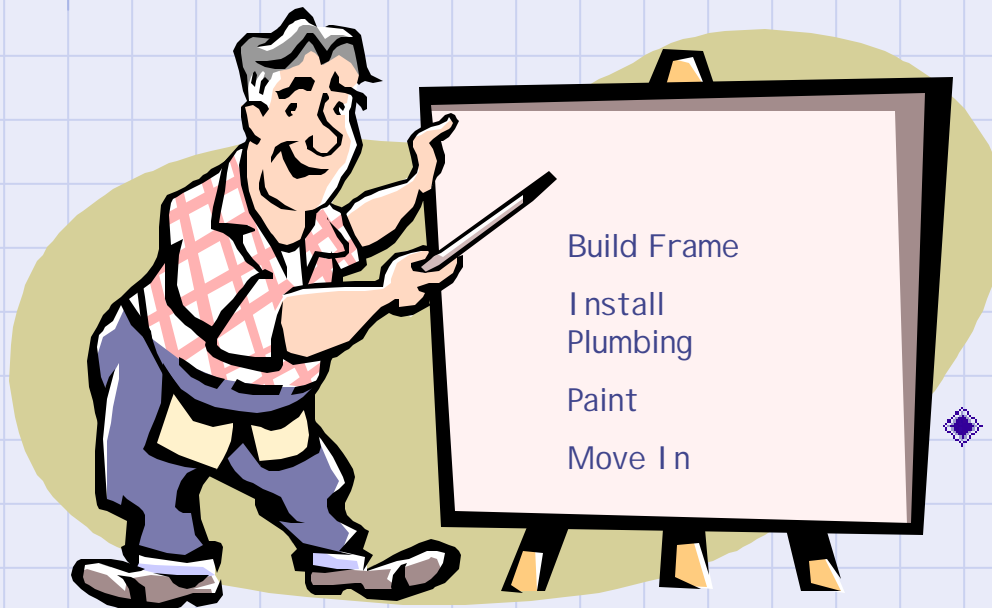


Plan It!



Phase 1: Vision

- ◆ Build a Statement of Objectives (SoO) and a Task Order (TO)
 - ◆ What is the purpose of the SoO and TO?
 - Give background of solution
 - Objectives of the solution
 - Government provided resources
 - Outputs of deliverables
 - Timeframe
 - ◆ What's available to help me?
 - SoO Sample
 - TO Sample



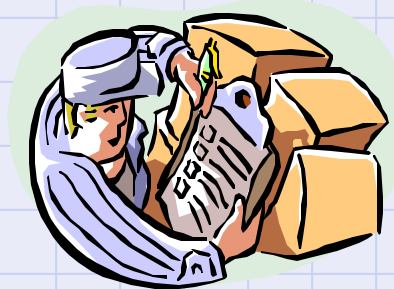
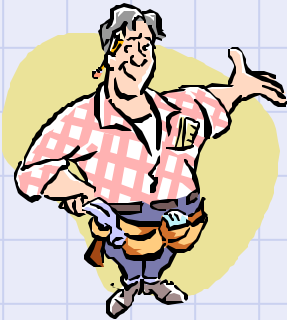


Phase 1: Vision

◆ Form an IPT (Integrated Product Team)

◆ An IPT:

- Is comprised of different team members from different organizations
- Brings together the right skills to complete the solution
- Reports to the Executive Sponsor



Plan It!



Phase 1: Vision

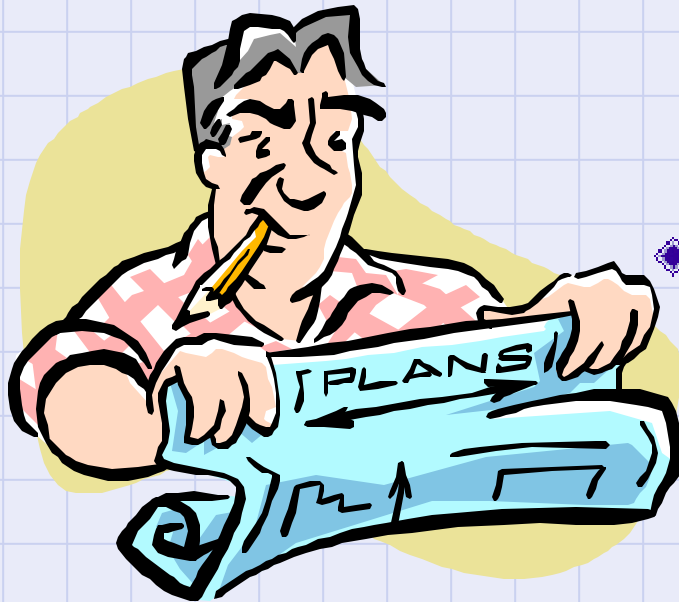
◆ Create the Solution Acquisition Plan

◆ What is a Solution Acquisition Plan?

- Estimates the work needed to complete the acquisition

◆ What's available to help me?

- The Solution Acquisition Planning Process Guide
- The Acquisition Planning Estimating Worksheet





Phase 1: Vision

◆ Develop the Work Breakdown Structure (WBS)

◆ What's in a Work Plan?

- Necessary Tasks
- Level of effort
- Cost
- Schedule

◆ What's available to help me?

- Solution Acquisition Project Management (SAPM) Process Guide





Phase 1: Vision

◆ The Security Vision Phase checklist

◆ What is a Security Checklist?

- Each phase of the SLC contains a security checklist which needs to be completed
- A FSA system's security officer will be assigned to perform system security checks

◆ What's available to help me?

- SLC System Security Process Guide
- Security Vision Phase Checklist



Plan It!



Phase 1: Vision

◆ Begin Project Management Activities

◆ What types of management activities?

- Status Reporting
- Risk and Issue Tracking
- WBS and SAP management

◆ What's available to help me?

- SAPM Process Guide
- Project Management templates



Plan It!



Phase 1: Vision

◆ A Quick Review:

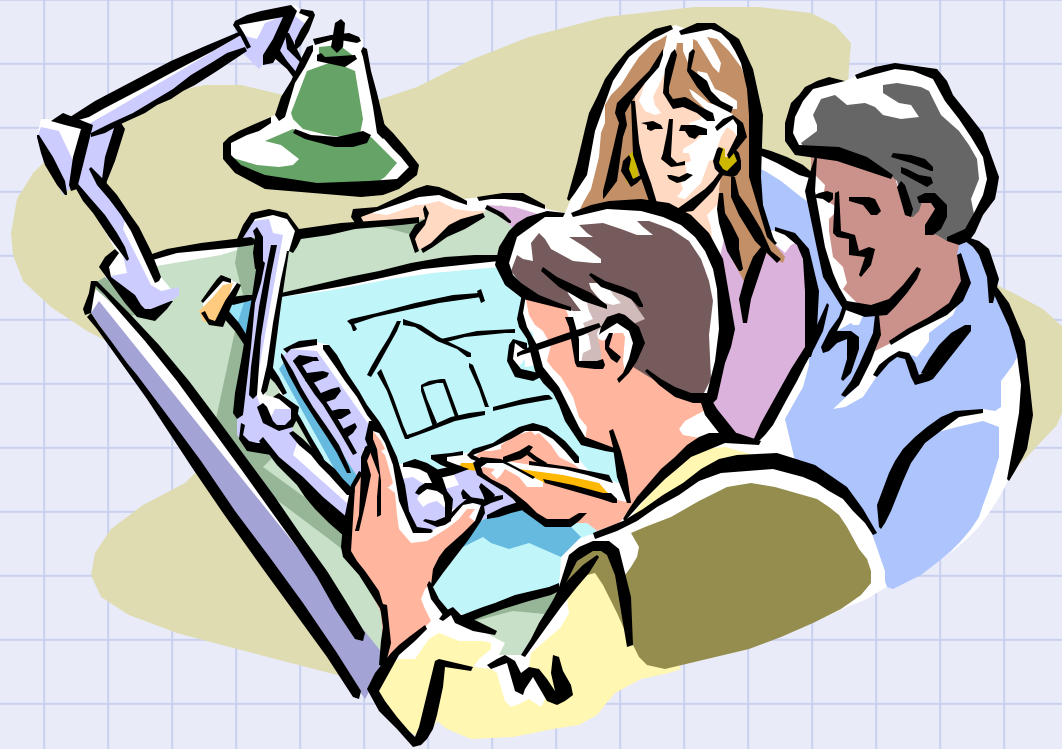
What we talked about...

- High Level Requirements
- Business Case
- Task Order/SoO
- IPT
- Solution Acquisition Plan (SAP)
- Work Breakdown Structure
- Project Management Activities
- Security Vision Phase Checklist

◆ Additional recommended activities include:

- Status reports
- Risk & Issue Tracking
- RDM Plan
- Quality Assurance Plan
- Configuration Management Plan
- TTS Plan

The Definition Phase



Design It!

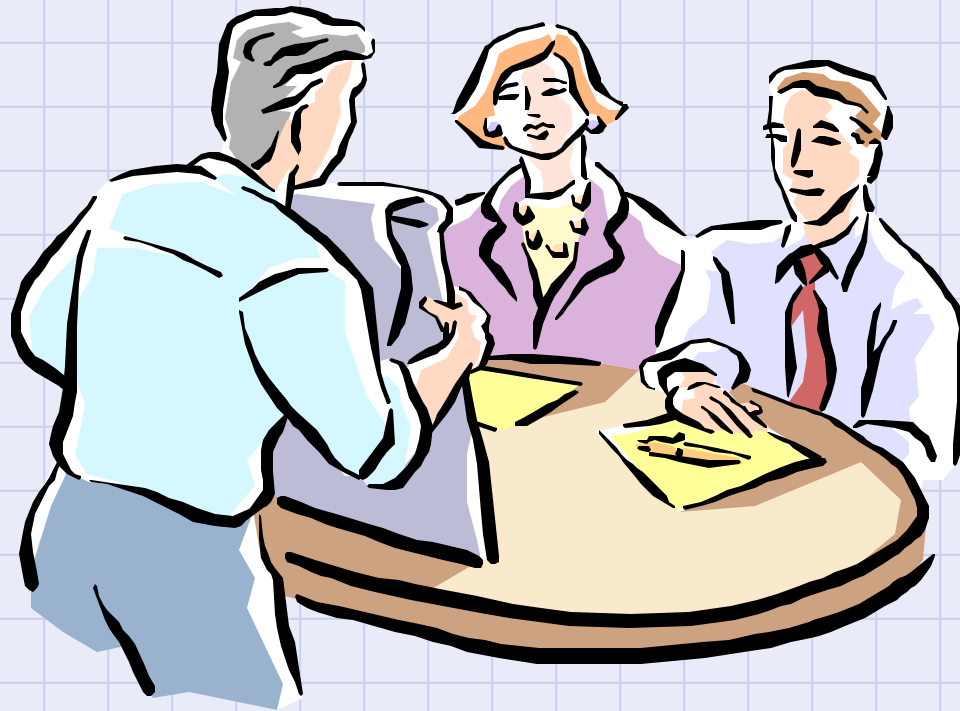
Phase 2: Definition

Design It!



◆ Purpose of the Definition Phase

- Develop solution requirements
- Develop and accept a preliminary design for the solution



Phase 2: Definition

Design It!



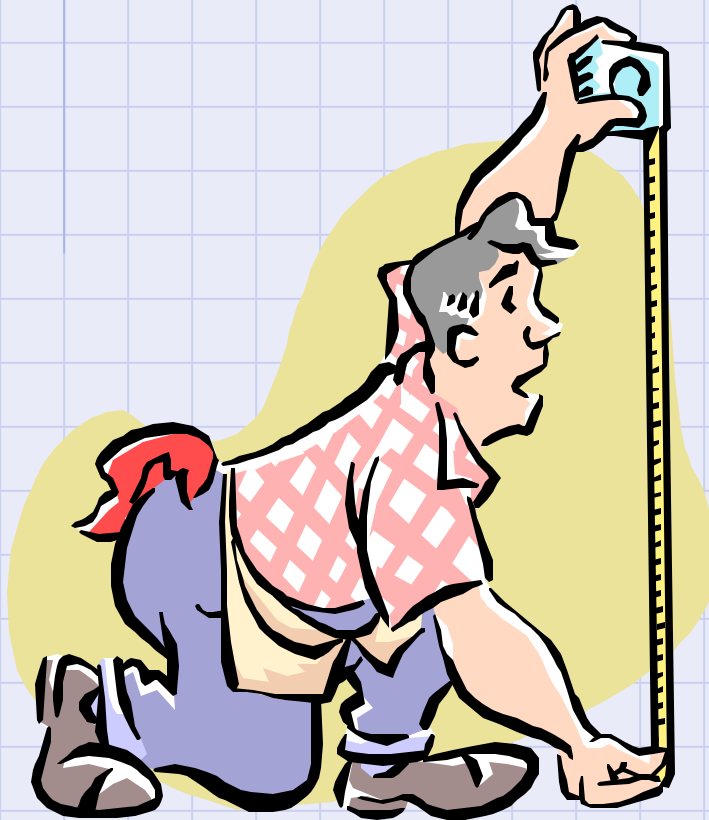
◆ Create and Approve Low Level Requirements

◆ What are low level requirements?

- High level requirements broken into specific testable requirements
- Low level requirements are mapped to high level requirements to ensure we meet and achieve the overall objective

◆ What's available to help me?

- The Requirements Development and Management Process Guide
- The Requirements Traceability Matrix



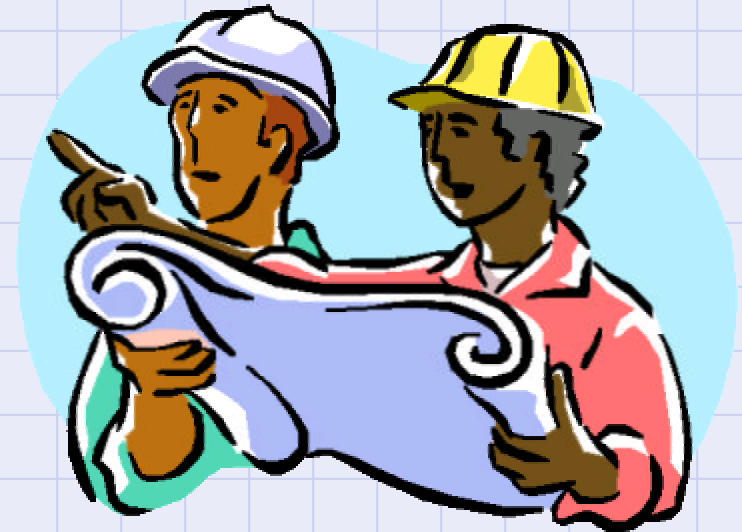
Phase 2: Definition

Design It!



◆ Develop and Document the Preliminary Design

- ◆ What is the preliminary design?
 - Reflects the functional solution of what will be delivered
 - Often, the design visually depicts the solution through graphic models, process flows, or block diagrams
- ◆ What's available to help me?
 - Preliminary Design Sample



Phase 2: Definition

Design It!



◆ Create a Configuration Management Plan

◆ What is Configuration Management?

- The process for identifying, managing, and tracking all solution components throughout the project
- Plan is approved by the Project Manager

◆ What's available to help me?

- The Configuration Management Process Guide
- Configuration Item Index and Configuration Library Samples



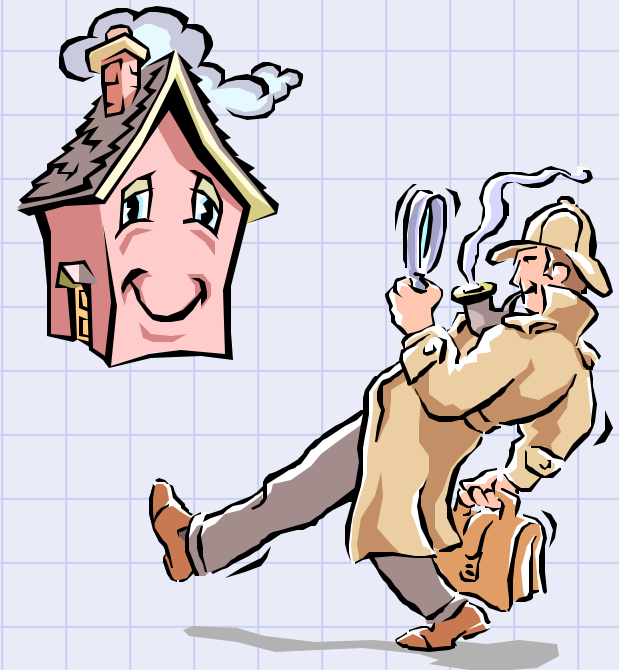
Phase 2: Definition

Design It!



◆ Document and Approve a Quality Assurance Plan

- ◆ What is a Quality Assurance Plan?
 - A plan describing when and how quality reviews will be performed throughout the project.
- ◆ What's available to help me?
 - Quality Assurance Process Guide
 - Quality Assurance Plan Template
 - Independent Verification and Validation (I V&V) Handbook



Phase 2: Definition

Design It!



◆ Document and Approve a Transition to Support Plan



◆ What is Transition to Support?

- Identification of the organization that has on-going responsibility for the support and maintenance of the solution after deployment
- Transfer of on-going responsibility to the support organization

◆ What's available to help me?

- Transition to Support Process Guide
- Transition to Support Plan Template

Design It!



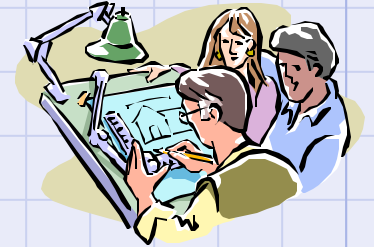
Phase 2: Definition

◆ The Security Definition Phase Checklist

- ◆ What is a Security Phase Checklist?
 - A list of all security related activities for that phase
 - In the definition phase, a system security officer ensures the solution requirements and Preliminary Design meet security requirements.
- ◆ What's available to help me?
 - SLC System Security Process Guide
 - Security Definition Phase Checklist



Design It!



Phase 2: Definition

◆ A Quick Review:

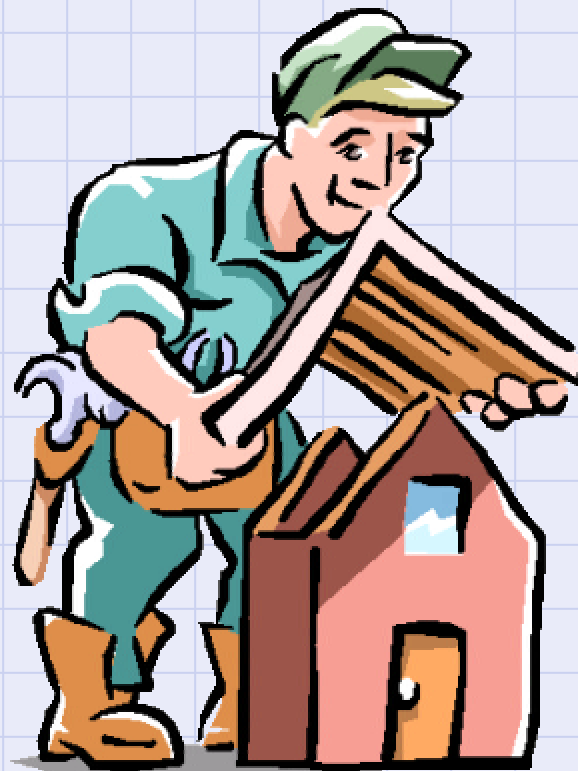
What we talked about...

- Low Level Requirements
- Preliminary Design
- Configuration Management Plan
- Quality Assurance
- Transition to Support (TTS)
- Security Definition Phase Checklist

◆ Additional recommended activities include:

- Status reports
- Risk & Issue Tracking
- Business Case Updated
- Transition to Support Plan
- Requirements Development & Management Plan

The Construction Phase



Build It!

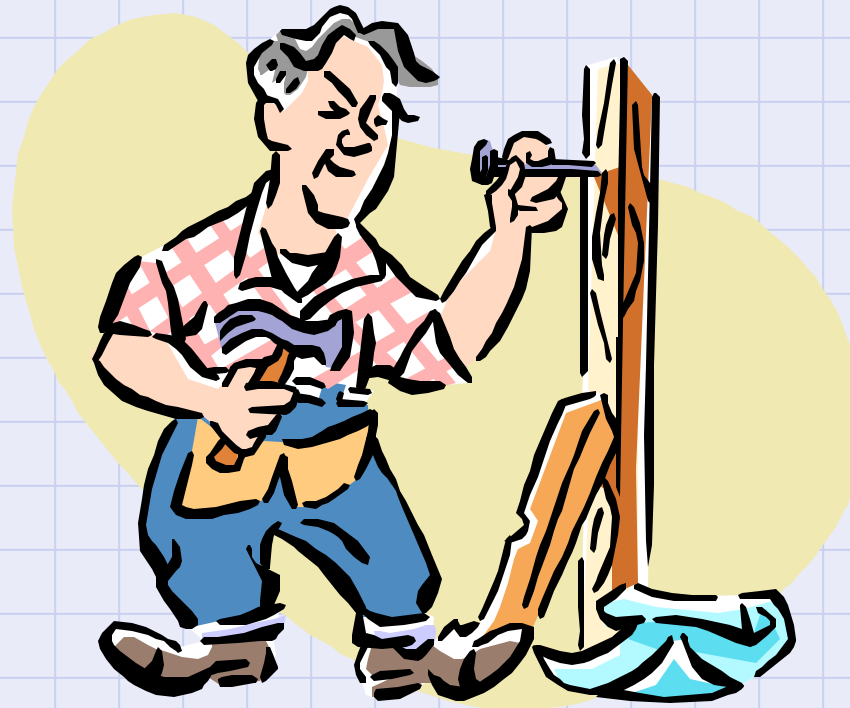
Phase 3: Construction

Build It!



◆ Purpose of the Construction Phase

- Develop the Detailed Design
- Build and Accept a Solution



Phase 3: Construction

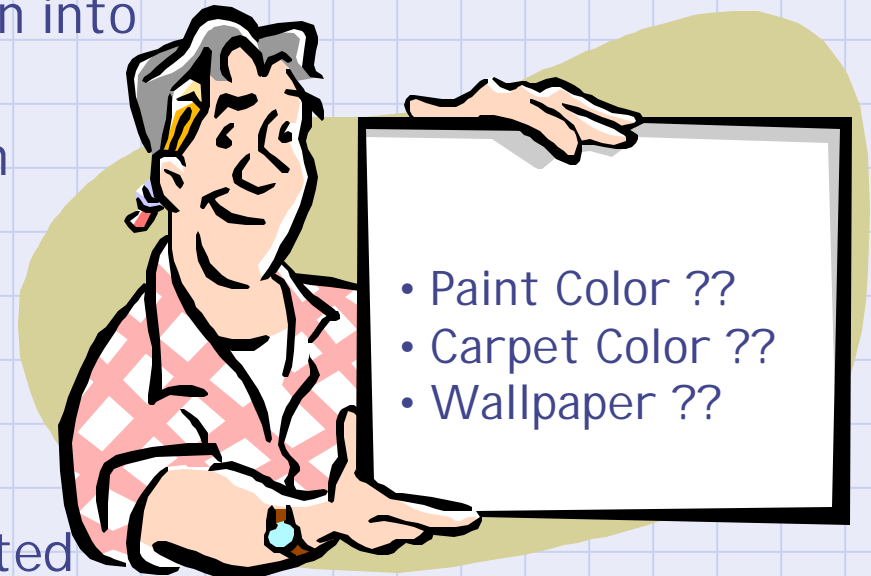
Build It!



◆ Develop and Approve the Detailed Design

◆ What is the Detailed Design?

- Refines the Preliminary Design into a Detailed Design
- Physically depicts the solution through architecture, design, database schemas and report prototypes
- Contains specific information enabling the solution to be thoroughly developed and tested



◆ What's available to help me?

- Detailed Design Document Samples
- FSA CIO Technology Handbook

Phase 3: Construction

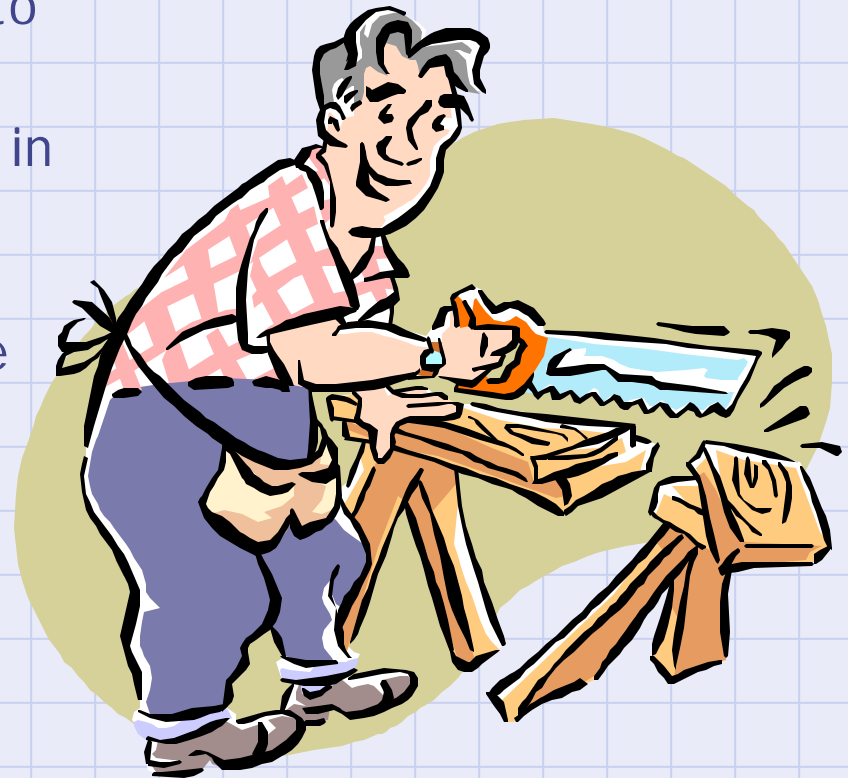
Build It!



◆ Build the Solution

- ◆ How is a solution built?
 - By transforming the design into the solution
 - In a development environment in preparation for testing
 - Some solutions are purchased off the shelf and some may be purchased services

- ◆ What's available to help me?
 - FSA CIO Information Technology Handbook

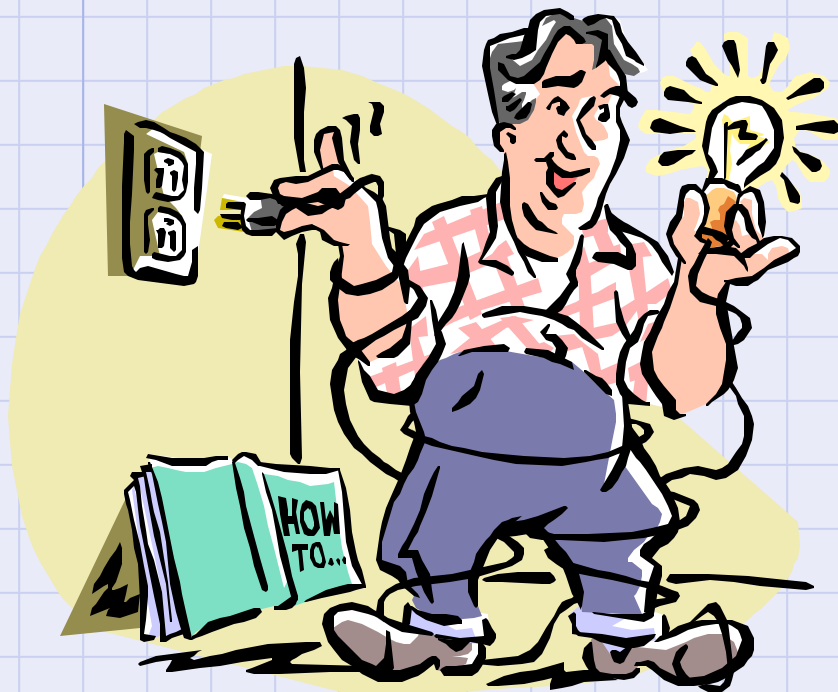


Phase 3: Construction

Build It!



◆ Test the Solution



- ◆ What is involved in testing?
 - Developed test plans are executed
 - Tests are performed to ensure the solution satisfies the defined functional, technical, physical and quality requirements
- ◆ What is available to help me?
 - FSA System Integration and Testing Process Handbook
 - FSA CIO IT Handbook

Build It!



Phase 3: Construction

◆ The Security Construction Phase checklist

◆ What are the security components in this phase?

- The Construction Phase contains numerous security activities.
- Some activities include:
 - Security Risk Assessment
 - System Security Plan
 - Access and Clearance Forms Completed

◆ What's available to help me?

- SLC System Security Process Guide
- Security Construction Phase Checklist



Phase 3: Construction

Build It!



◆ Conduct Production Readiness Review (PRR)

◆ What is a PRR?

- An official sign-off of the solution's readiness
- Reviews are conducted to ensure performance, security and quality standards are achieved
- Assesses the readiness of the solution for deployment

◆ What's available to help me?

- PRR Checklist
- PRR Procedures Guide



Build It!



Phase 3: Construction

◆ A Quick Review:

What we talked about...

- Detailed Design
- Test Plans/Tested Solution
- Product Readiness Review
- Build the Solution
- Test the Solution
- Security Definition Phase Checklist

◆ Additional recommended activities include:

- Status reports
- Risk & Issue Tracking
- Security Risk Assessment
- QA Reviews
- Configuration Management Activities
- Transition to Support Plan Updated
- Test Results

The Deployment Phase



Move In!

Phase 4: Deployment

Move In!



◆ Purpose of the Deployment Phase

- Deploy the developed solution into production



Phase 4: Deployment

Move In!



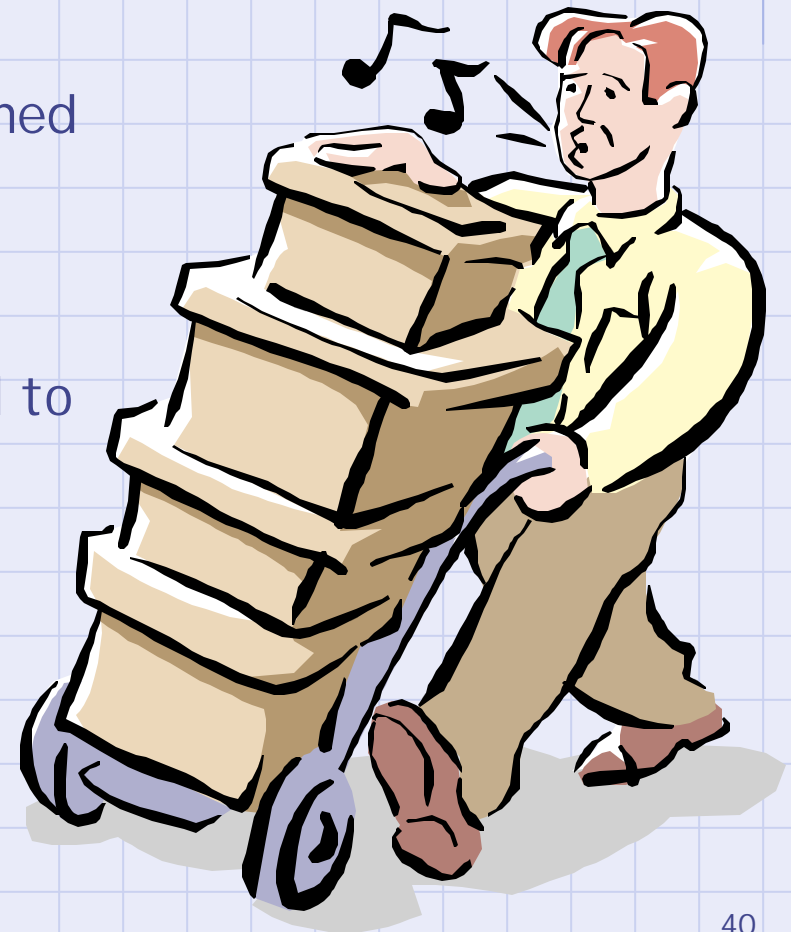
◆ Successful Deployment of the Solution

◆ What is Deployment?

- Configuration items are baselined
- The solution is moved into production for everyday use
- The Transition to Support Readiness Review is conducted to ensure support readiness activities are complete

◆ What's available to help me?

- CM Process Guide
- Transition to Support Process Guide



Phase 4: Deployment

Move In!



◆ The Security Deployment Phase Checklist

- ◆ What are the security activities conducted in this phase?
 - A documented plan is approved for maintaining security
 - Security Controls are tested
 - All System Security activities are brought to closure
- ◆ What's available to help me?
 - Security Deployment Phase Checklist
 - SLC System Security Process Guide



Phase 4: Deployment

Move In!



◆ A Quick Review:

What we talked about...

- Solution is successfully deployed
- Transition to Support Readiness Review
- Security Deployment Phase Checklist
- Configuration Item Index is baselined

◆ Additional recommended activities include:

- Project inventory list complete
- QA Reviews Documented
- Applicable Training conducted

The Support & Retirement Phase



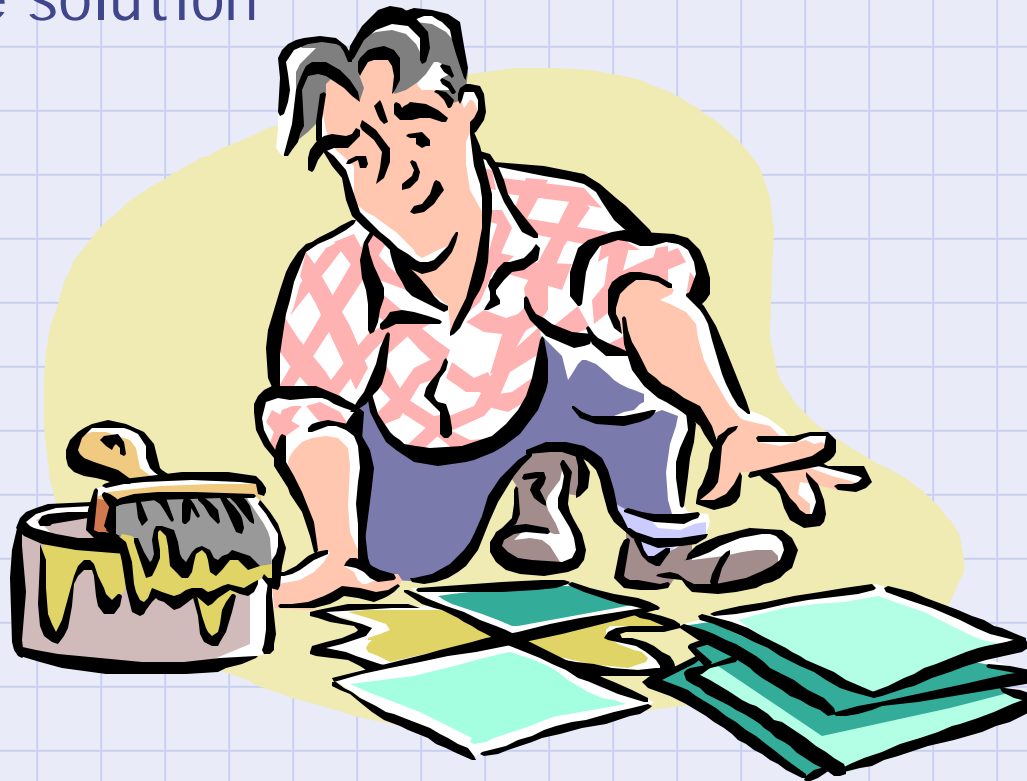
Maintain It!

Phase 5: Support & Retirement

Maintain It!



- ◆ Purpose of the Support & Retirement Phase
 - Provide operational and maintenance support for the solution

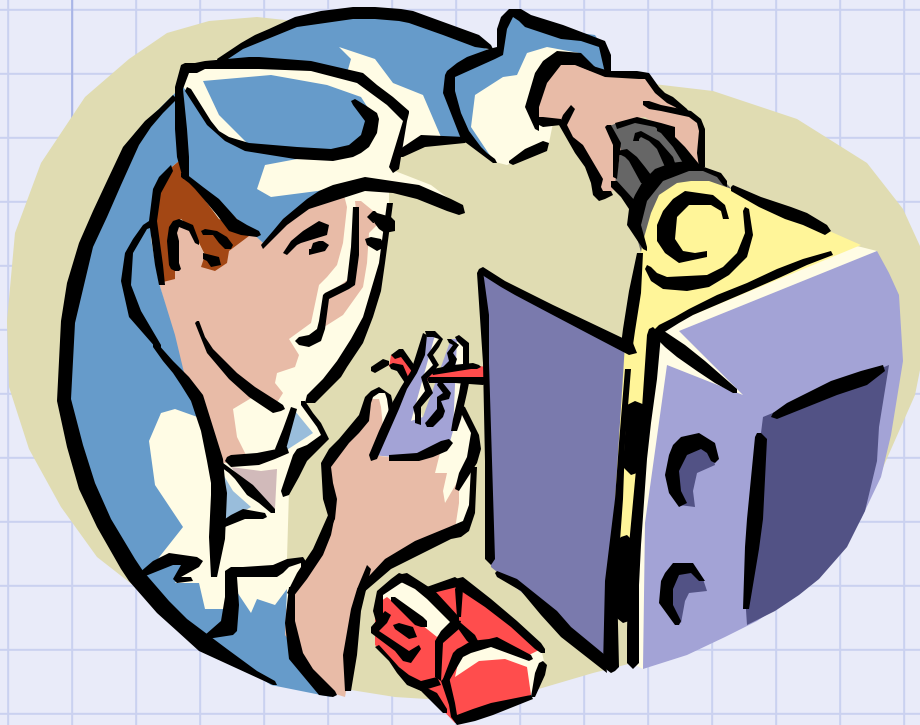


Phase 5: Support & Retirement

Maintain It!



◆ Transition the solution to the support organization



◆ What does transitioning the solution mean?

- The support organization takes over primary responsibility for the solution

◆ What's available to help me?

- The Transition to Support Process Guide
- The Transition Readiness Checklist

Phase 5: Support & Retirement

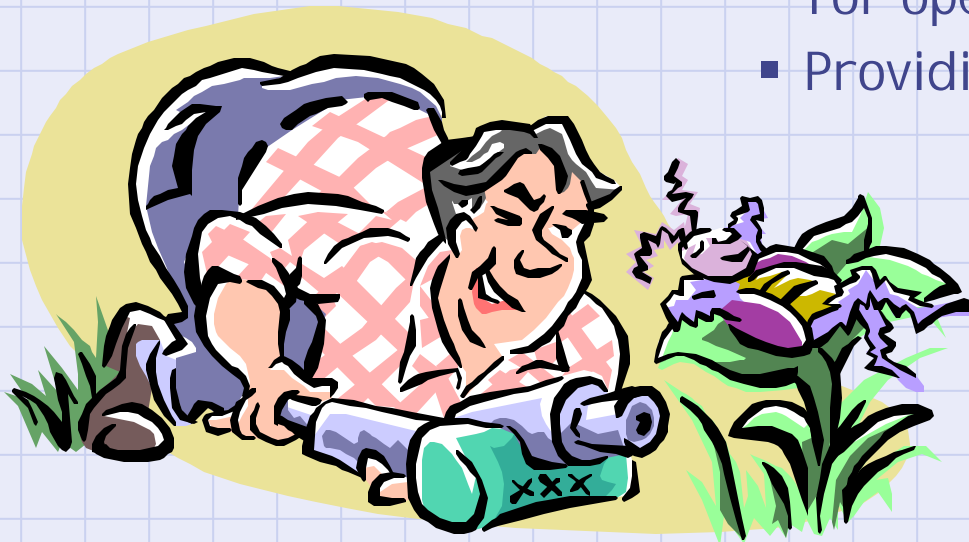
Maintain It!



◆ Perform Operations and Maintenance

◆ What does Operations and Maintenance mean?

- Continually fixing, repairing and enhancing the solution
- Ensuring operational budget is available for operating and maintaining a solution
- Providing Help Desk or other services



◆ What's available to help me?

- CM Process Guide

Phase 5: Support & Retirement

Maintain It!



◆ The Security Support & Retirement Phase checklist

- ◆ What are the on-going security activities?
 - Several security activities and documents should be maintained in this phase
 - The System Security Plan should be continually reviewed and updated as the system undergoes major changes
- ◆ What's available to help me?
 - SLC System Security Process Guide
 - Security Support Phase checklist



Phase 5: Support & Retirement

Maintain It!



◆ A Quick Review:

What we talked about...

- Transition to Support
 - Operations and Maintenance
 - SLC Security Support & Retirement Phase Checklist
-
- ◆ The Support & Retirement Phase will continue until the system is retired or until a new solution is envisioned and the life cycle begins again



What's Left?

A Completed Dream house...



Plan I t!
Vision



Design I t!
Definition



Build I t!
Construction



Move I n!
Deployment



Maintain I t!
Support &
Retirement



Where can I get my copy?

- ◆ Intranet <http://sfanet/cio>
- ◆ Extranet <https://extranet.sfa.ed.gov/cio>



Where can I get more information?



◆ Contact ECAD SLC Team:

- Lana Gourdine – 377-3535
Lana.Gourdine@ed.gov

